TACOM LCMC…Understanding and Combating Aging

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Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

The Environment

Army Equipment Headed for Iraq

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TACOM LCMC
Mission / Product Lines / Magnitude

Develop, acquire, field, and sustain Soldier and ground systems for the Warfighter through the integration of effective and timely Acquisition, Logistics, and cutting-edge Technology

What we do (Core Competencies):

- Research, Development, Engineering
- Acquisition / Program Management
- Logistics, Industrial Operations, and Contracting

The Magnitude:

- 141 Allied Countries Own TACOM Equipment
- Every Army Unit has TACOM Equipment
- Approximately 3000 Fielded End Items
- 29,000 Components

The TACOM LCMC Product Lines:

- Combat Vehicles
- Trailers
- Materiel Handling Equipment
- Fuel & Water Dist Equipment
- Chemical Defense Equipment
- Howitzers
- Commercial Vehicles
- Tactical Vehicles
- Construction Equipment
- Sets, Kits & Outfits
- Shop Equipment
- Large Caliber Guns
- Watercraft
- Mortars
- Aircraft Armaments
- Rail
- Fuel & Lubricant Products
- Rifles / Machine Guns
- Soldier Equipment
- Tactical Bridges

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Equipment Condition vs Causes

Condition	Causes

Condition

- Well Used = High miles/hours

- Rust & Corrosion issues

- Obsolescence issues

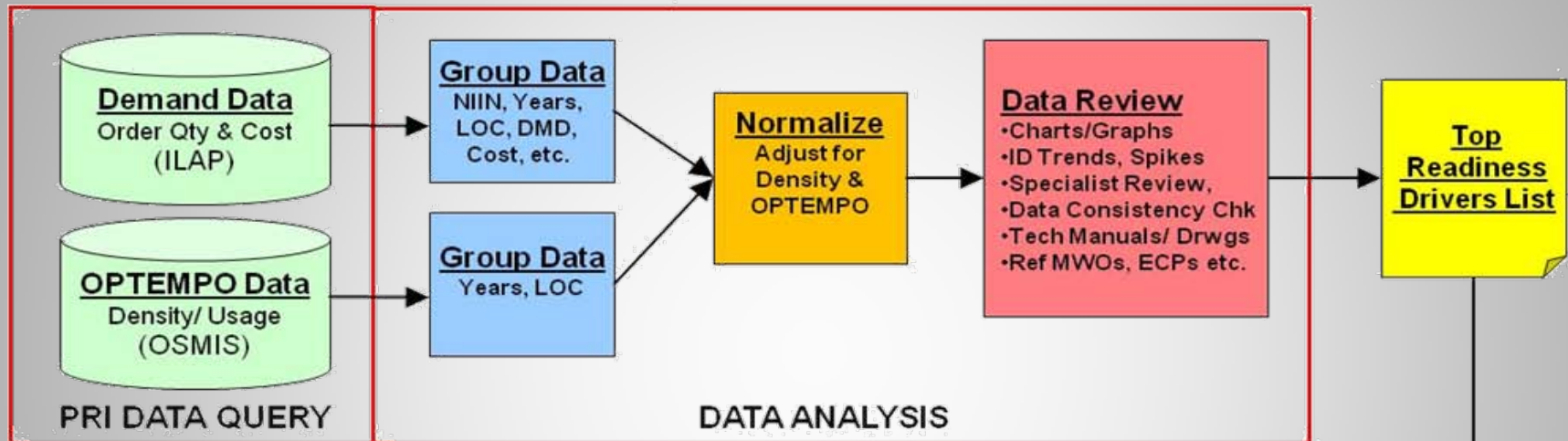- Damage or degradation

- Multiple Configurations

Causes

- Age, deployments, optempo, multiple users

- Exposure to unexpected & extreme conditions (caustic elements & long term storage)

- High Demand, transportation, return & repair, funding constraints

- Age, Technology and Industrial Base influences

- Environmental developments and considerations

- Long term wear influences (cracks/stress)

- Some existing equipment will not be included with the future force

- Multiyear acquisitions/support strategies/policy guidance

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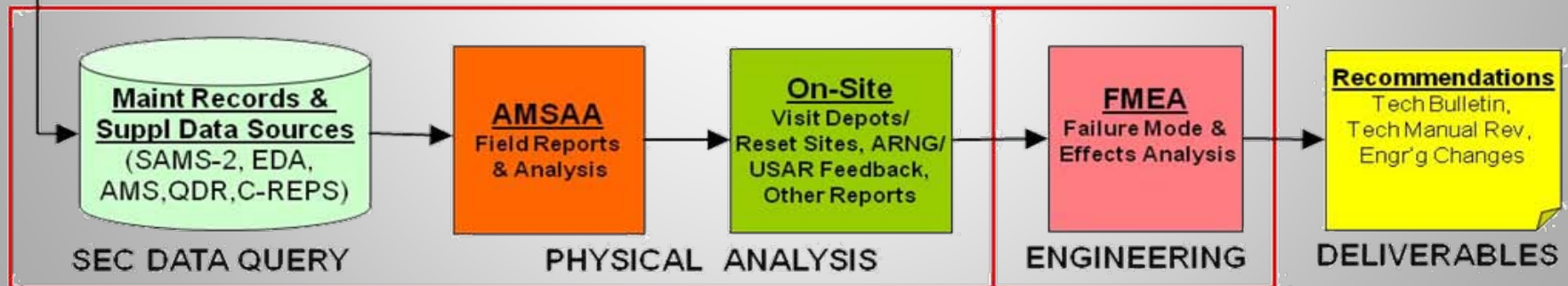# Delayed Desert Damage & Degradation Program (4D)

- Look at effects of extended SWA Operations on TACOM equipment; maintenance actions to reduce environmental impacts

- Data mine/analyze Logistics Information Warehouse and related data sources; and identify and investigate candidate and frequent, high-cost critical demand components

- Complete Failure Modes and Effects Analysis (FMEA), Root Cause Analysis, and Evaluation/Recommendations

- Utilize AMSAA Sample Data Collectors, Depot Reset, Army, and Reserve activities in identifying demand drivers

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4D Process Overview

Data Mining & Analysis

Demand Data
Order Qty & Cost
(ILAP)

OPTEMPO Data
Density/ Usage
(OSMIS)

PRI DATA QUERY

Group Data
NIIN, Years,
LOC, DMD,
Cost, etc.

Group Data
Years, LOC

Normalize
Adjust for
Density &
OPTEMPO

Data Review
• Charts/Graphs
• ID Trends, Spikes
• Specialist Review,
• Data Consistency Chk
• Tech Manuals/ Drwgs
• Ref MWOs, ECPs etc.

DATA ANALYSIS

Top Readiness Drivers List

Validation

Maint Records & Suppl Data Sources
(SAMS-2, EDA, AMS,QDR,C-REPS)

SEC DATA QUERY

AMSAA
Field Reports
& Analysis

PHYSICAL

On-Site
Visit Depots/
Reset Sites, ARNG/
USAR Feedback,
Other Reports

ANALYSIS

FMEA
Failure Mode &
Effects Analysis

ENGINEERING

Recommendations
Tech Bulletin,
Tech Manual Rev,
Engr'g Changes

DELIVERABLES

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4D Process Observations

- Surprisingly, equipment reliability improved while used as a result of increased attention and maintenance

- The 4D process identified actual versus perceived causes of equipment failures

- The biggest impact to equipment condition related to deployment was related to corrosion damage occurring during re-deployment prep and long term storage

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What Is RESET?

Restoring units returning from a theater of operations to a desired level of combat capability based on mission requirements & available resources.

GOAL: Assets available for "Next Deployers"

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Forms of RESET

Since Time & Money are limited… there are several options available to "Reset" Army Units with TACOM equipment:

PROCUREMENT

New Procurement to Cover Battle Losses & Washouts

MAINTENANCE

Major Repair of Damaged & Stressed Vehicles

Inspection & Minor Repair (10/20 + 3D)

Maintain Left Behind Equipment (LBE)

REPLACE Reset — Industrial Base (Depots/Arsenals) & Original Equipment Manufacturers

RECAP Sustainment Level Reset — Industrial Base (Depots/Arsenals), DOLs National Contractors & In-Theater Repairs

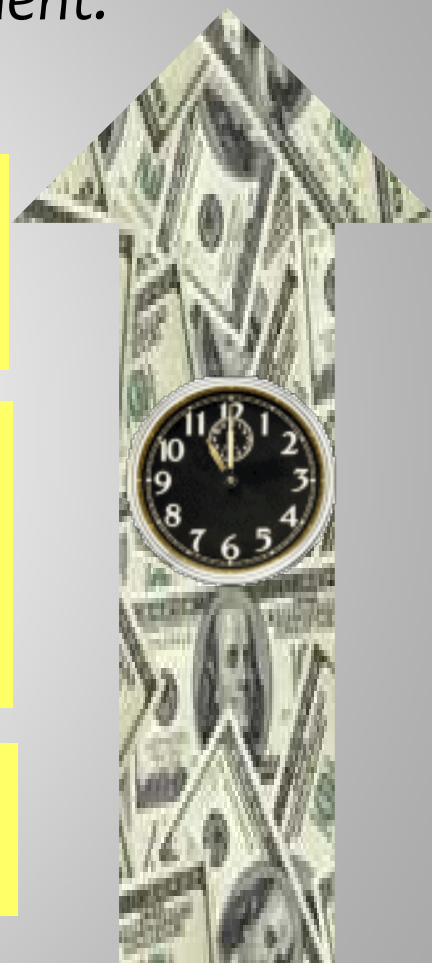**Field Level Reset** — Unit Motor Pools, DOLs & FLRCs, Regional Contractors

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TACOM FLEET REPAIR FORECAST MODEL

SOURCE OF REPAIR AVAILABILITY CONSIDERATIONS:
Manpower
Scheduling / Time
Funds
Parts

Goal = CONSISTENT Quality

UNIT LEVEL

FIELD LEVEL
(DOLs/FLRCs/ Local & Regional Contractors)

SUSTAINMENT LEVEL
(Depot/National Contractors) DOLs

Unit determines what their Soldiers can do in the Motor Pool

Same Standards for UNDERLINE ANY site conducting **Field Level** Repairs

Same Standards for ANY site conducting **Sustainment Level** Repairs

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SARET

SARET-R supports the following standard small arms and crew-served weapons:

- M9 Pistol
- M16 Rifle
- M4 Carbine
- M203 Grenade Launcher
- M249 Machine Gun
- M240 Machine Gun
- M2 Machine Gun
- MK19 Grenade Machine Gun
- M296 Machine Gun (Kiowa) (dismounted)
- M500 Shotgun
- M107 Sniper Rifle
- Mortars and mounts: 60mm, 81mm, 120mm (tubes and ground mounts only)

Small Arms Readiness Evaluation Team w/Repair (SARET-R)

FY 09 **Missions Completed** ……………………………… 52
     Weapons Inspected / Repaired …. ……………. 172,431 / 171,348 (99%)
     Weapons Requiring Depot Repair……………...... 2,065 (1.20%)
FY 10 **Missions Planned / Completed** ……………...…... 57 / 2
     Weapons Scheduled / Completed …..……....….. 189,209 / 8,719
     Weapons Inspected / Fully Mission Capable … 8,719 / 8,570 (98%)
     Weapons Requiring Depot Repair…..……….….. 113 (1%)

FY 04-10 **All SARET Missions / Weapons**……………….….. 216 / 615,042

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SARET-O

Supports the following standard weapon optics:

- M68 Sight, Reflex
- M145 Machine Gun Optic
- M203 Day Night Sight
- XM150/Advanced Combat Optical Gun Sight
- M22 Binoculars
- M24 Binoculars
- M25 Stabilized Binoculars
- M151 Spotting Scope

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CBERT

Supports the following Chemical Detection Equipment (CDE) systems:

Individual Protection
- M40 Mask
- M42 Mask
- M45 Mask
- M48 Mask

Contamination Avoidance
- Improved Chemical Agent Monitor (ICAM/CAM)
- M22 ACADA

Decontamination
- M17 Decon Apparatus

Organizational Clothing and Individual Equipment (OCIE)

Mission: To replace organizational clothing and individual equipment (OCIE) worn or destroyed during deployments in order to allow units to flow smoothly through the ARFORGEN readiness cycle using CMO and RFI.

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Force Provider

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Condition

- The entire fleet (53 modules) is deployed or in the process of deploying

- 15 are being reviewed as washouts

- Approximately half of remaining 38 are newly deployed and in average condition

- The remainder are nearing the end of their useful life and are in very poor condition

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Contributing Causes

- Age and a lack of operator level maintenance are the prime drivers of the condition

- Force Provider Modules, once established on a FOB, become akin to a common utility

- Not much attention is paid to the daily maintenance

- As modules are moved, many components are pilfered, or otherwise re-tasked

- This item is a non-reportable item that consists of several thousand lines

- It is large enough and complex enough that no one is maintaining it as a system

- The end result is poor material condition

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Corrective Actions

- TACOM has received additional direct theater support funding to improve material conditions and accountability in theater

- We, in conjunction with PM-FSS, have established a forward support area and are working closely with CJTF-82 and USFOR-A to identify, repair, and reuse material as efficiently as possible

- The intent is to manage the use of the materials and leverage the LOGCAP contractors for maintenance

- Force Provider requested a WSR through DA but did not make the priority list

- We are working to ensure it is reviewed in the AMC internal WSR.

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Issues/Challenges

- Return of assets for induction... Force Provider Base-camp Materials (Tents, Air Conditioners, Showers, latrines, etc...) are all highly desirable

- Units hold on to components and reuse them outside of the context of the module

- Limited material flow to Reset

- Result is that we have depleted the APS inventory

- TACOM is working closely with the deployed commands, DA and the R2TF to expedite any returned materials.

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